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January 18, 2019

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
The Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia SC 29210

Re: **Application of Duke Energy Progress, LLC for Adjustments in Electric Rate Schedules and Tariffs and Request for Accounting Order**
Docket No.: 2018-318-E

Dear Mrs. Boyd:

Enclosed for filing please find copies of Duke Energy Progress LLC's Errata to the Direct Testimony of Retha H. Hunsicker, Jon F. Kerin and Kendra Ward. This filing includes 1) an Errata detailing the changes to the testimony; and 2) replacement pages of the corrected testimony for ease of the Commission, the Office of Regulatory Staff and other parties.

Please do not hesitate to contact me if you have any questions or require any further information.

Sincerely,

Heather Shirley Smith

Heather Shirley Smith

Enclosure

cc: Nanette Edwards, Esq., Office of Regulatory Staff
Dawn Hipp, Office of Regulatory Staff
Jeffrey M. Nelson, Esq., Office of Regulatory Staff
Ms. Carri Grube Lybarker, Esq., SC Department of Consumer Affairs
Ms. L. Becky Dover, Esq., SC Department of Consumer Affairs
Service List

BEFORE
THE PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

DOCKET NO. 2018-318-E

In the Matter of:	)	
	)	**DUKE ENERGY PROGRESS, LLC**
Application of Duke Energy Progress,	)	**ERRATA TO THE DIRECT**
LLC for Adjustments in Electric Rate	)	**TESTIMONY AND EXHIBITS OF**
Schedules and Tariffs	)	**RETHA H. HUNSICKER, JON F.**
	)	**KERIN AND KENDRA WARD**
	)	

ERRATA TO THE DIRECT TESTIMONY AND EXHIBITS OF RETHA H. HUNSICKER

Duke Energy Progress ("DEP") provides the following erratum to the Direct Testimony and Exhibits of Retha H. Hunsicker.

1. Page 17, Line 16. Replace the dollar amount "$0.9 million" with the dollar amount "$0.09 million."

ERRATA TO THE DIRECT TESTIMONY AND EXHIBITS OF JON F. KERIN

DEP provides the following errata to the Direct Testimony and Exhibits of Jon F. Kerin.

1. Replace Kerin Direct Exhibit 7 with Kerin Revised Exhibit 7. The exhibit has been updated to reflect ash beneficiation through September 30, 2018. Updated numbers are highlighted in Kerin Revised Exhibit 7. The following corrections to Witness Kerin's testimony address these changes:
    a. Page 10, Line 13. Insert the word "Revised" after the word "Kerin" and before the words "Exhibit 7."
    b. Page 10, Line 13. Replace the word "August" with the word "September."
    c. Page 20, Line 20. Replace the word "August" with the word "September."
    d. Page 20, Line 22. Replace the number "331,000" with the number "336,000."
2. Replace Kerin Direct Exhibit 10 with Kerin Revised Exhibit 10. The exhibit has been updated to reflect actual compliance spend by site through September 30, 2018. Updated numbers are highlighted in Kerin Revised Exhibit 10. The following corrections to Witness Kerin's testimony address these changes.
    a. Page 6, Line 11. Replace the word "August" with "September" and replace the word "September" with "October."

b. Page 9, Line 1. Replace the word "August" with "September" and replace the word "September" with "October."

c. Page 10, Line 19. Insert the word "Revised" after the word "Kerin" and before the words "Exhibit 10."

d. Page 38, Line 5. Insert the word "Revised" after the word "Kerin" and before the words "Exhibit 10."

ERRATA TO THE DIRECT TESTIMONY AND EXHIBITS OF KENDRA WARD

DEP provides the following errata to the Direct Testimony and Exhibits of Kendra Ward.

1. Upon further review, DEP decided to align the retail line loss differential amount included on Ward Exhibit 1 to the methodology used by Duke Energy Carolinas to calculate the Duke Energy Carolinas line loss calculationin Docket No. 2018-319-E. Because of the revision, the SC retail line loss differential amount was updated from $480,000 in Ward Exhibit 1, Line 8, Column 6 to $508,000 in Ward Revised Exhibit 1, Line 8, Column 6. Additionally, the total adjusted SC retail fuel and fuel-related costs amount was updated from $170,720,595 in Ward Exhibit 1, Line 9, Column 6 to $170,748,754 in Ward Revised Exhibit 1, Line 9, Column 6. Updated numbers are highlighted in Ward Revised Exhibit 1. The following corrections to Witness Ward's testimony address these changes.

   a. Page 3, Line 11. Insert the word "Revised" after the word "Ward" and before the words "Exhibit 1."

   b. Page 4, Line 18. Insert the word "Revised" after the word "Ward" and before the words "Exhibit 1."

   c. Page 4, Line 19. Change $170,720,595 to $170,748,754.

d. Page 5, Line 4. Change $170,720,595 to $170,748,754.

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2018-318-E

In the Matter of:	)	
	)	**DIRECT TESTIMONY OF**
Application of Duke Energy Progress, LLC	)	**RETHA HUNSICKER**
For Adjustments in Electric Rate Schedules	)	**FOR DUKE ENERGY**
And Tariffs	)	**PROGRESS, LLC**
	)	

scope of the contracts. Specific costs to cover activities beyond the scope of the contracts but within the scope of the program, such as the effort to modify more than 100 interfacing systems, were added, leveraging established program estimating techniques and assumptions. These forecasted expenses were derived by members of the program team, each with extensive experience estimating and managing large-scale technology development programs similar to Customer Connect. The average O&M expense forecasted over the 2019-2020 period and attributable to DE Progress SC, which served as the basis for the incremental revenue requirement in this case, is approximately $1.4 million. That amount includes these components:

- Costs directly correlated with the fixed fee contracts, totaling approximately $0.27 million.
- As described above, the fixed fee contracts contain provisions requiring the Company to provide specific levels of labor to support execution of the work. Costs for the incremental labor required to support the scope of the fixed fee contracts total approximately $0.09 million.
- Costs to develop each interface is within the scope of the fixed fee contract; however, the cost for any modifications required of the interfacing system is not within the scope of the fixed fee contract and represents a critical component of the overall program scope. Costs for the incremental labor required to modify the systems that the new

BEFORE
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SOUTH CAROLINA

DOCKET NO. 2018-318-E

IN THE MATTER OF:

Application of Duke Energy Progress, LLC	)	**DIRECT TESTIMONY OF**
For Adjustments in Electric Rate Schedules	)	**JON F. KERIN FOR**
And Tariffs	)	**DUKE ENERGY PROGRESS, LLC**

Q. HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

A. Yes. I filed direct testimony regarding CCR issues in DE Progress' rate case in South Carolina in Docket 2016-227-E and appeared before the Public Service Commission of South Carolina in October 2016 in connection with that case. I also filed direct and rebuttal testimony regarding CCR issues in DE Progress' and Duke Energy Carolinas, LLC's ("DE Carolinas") recent North Carolina rate cases in Docket Nos. E-2, Sub 1142 and E-7, Sub 1146, respectively, and testified before the North Carolina Utilities Commission in connection with those cases.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. DE Progress is seeking recovery of CCR expenses incurred from July 2016 through September 2018 and estimated costs to be incurred October 2018 through December 2018 related to compliance with applicable regulatory requirements. The purpose of my testimony is to explain those regulatory requirements and to explain how our compliance actions and decisions, including our current plans to meet existing legal requirements, have been reasonable, prudent, and cost-effective approaches to comply with those regulatory requirements.

Q. PLEASE BRIEFLY SUMMARIZE YOUR TESTIMONY.

A. DE Progress has become subject to both federal and state regulatory requirements that mandate closure of its ash basins and other ash storage areas. Since the early 1900s, DE Progress has disposed of CCR in compliance with then-current regulatory requirements and industry practices. Until the 1950s, CCR were either emitted through, in the case of fly ash, smokestacks or, in the case of bottom ash, manually removed from boilers and stored in fill areas. Since that time, the

September 2018, and expected costs from October 2018 to December 2018 as explained in more detail by Witness Bateman. My testimony and exhibits demonstrate that both of these incurred and expected compliance costs are reasonable, prudent, and cost-effective given the individual facts and circumstances at each power plant and ash basin site at issue.[2]

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. In this Section I, I have provided information concerning my background and the purpose of my testimony. In Section II, I provide an overview of the generation resources, including coal-fired generation, that the Company has used to reliably and efficiently serve customers for over 100 years of its existence. I explain that CCR are the natural byproduct of burning coal to generate electricity. I discuss the Company's past practices for the storage and disposal of CCR, and I explain that its practices have been in accordance with the electric power industry's prudent standards and applicable laws, regulations, and permit requirements as they have existed over time. In Section III, I discuss the new requirements imposed on the Company under the new CCR compliance requirements. In Section IV, I discuss the Company's plans to comply with the CCR compliance requirements, the required regulatory approvals and permits for DEP compliance plans, including timing and implementation issues, and costs incurred to date and expected over the next several years. I also explain and demonstrate how each of the Company's historical and ongoing CCR compliance costs are reasonable,

[2] This case excludes any fines or penalties incurred by DE Progress related to ash basin closure or management.

prudent, and cost-effective given the individual facts and circumstances at each power plant and ash basin site at issue.

Q. ARE YOU PROVIDING ANY EXHIBITS WITH YOUR TESTIMONY?

A. Yes, I have attached 10 total exhibits, described below, as well as an appendix:

Kerin Exhibit 1: Statutes and Regulations (listing of relevant coal ash environmental regulations);

Kerin Exhibit 2: CCR Rule (text of the Federal CCR Rule);

Kerin Exhibit 3: Site Locations NC and SC (map of coal ash facilities);

Kerin Exhibit 4: Site Facts (site-specific background information);

Kerin Exhibit 5: Ash Basin Information (site-specific information about ash units)

Kerin Exhibit 6: Responses to Rule Changes Through the Decades DEP (summary of DE Progress' compliance with evolving environmental regulations);

Kerin Revised Exhibit 7: Beneficiation Year 2015 thru Sepember 2018 (summary of beneficiation at DE Progress Sites);

Kerin Exhibit 8: Graphics Cap-in-Place and Landfill (graphical depiction of cap-in-place and landfill closure methodologies);

Kerin Exhibit 9: Closure Plans (site-specific closure plans and engineering reports); and

Kerin Revised Exhibit 10: Components of 2015-2018 Recovery Request (summary of costs and regulatory drivers relevant to DE Progress' application).

functions for other power plant process water flows, such as low volume wastewater, coal pile run-off, landfill leachate, and FGD wastewater. Additionally, all plant discharges will be rerouted away from ash basins at retired and active sites.

DE Progress has also historically pursued opportunities to sell ash for beneficial reuse and will continue to do so as feasible. As the regulatory requirements for ash reuse tightened, the Company limited its sale of ash to situations in which compliance could be carefully monitored.

In summary, beyond the storage of fly ash and/or bottom ash, the operation of ash basins has historically evolved to accept new CCR flows resulting from FGD modifications required to address air emissions and also to accept other non-CCR process flows, such as coal pile run-off and low volume wastewater. The construction and use of the ash basins is the final step in the generation process that has resulted in reliable, efficient, coal-fired electricity in the Carolinas for many decades.

Q. IS THERE ANY BENEFICIAL REUSE FOR THE CCRS?

A. Yes. As referenced above, Duke Energy has endeavored across its coal-fired generating fleet to maximize the beneficial use of production ash and to reclaim, where possible, stored ash for sale for beneficial use. Ash beneficiation began in DE Progress in 1998 at the Roxboro Station. From January 2016 through September 2018, 30 percent of the DE Progress fleet production ash, or approximately 336,000 tons, was sold for beneficial reuse to produce products such as a replacement for Portland Cement, bricks, and blocks. It should be noted

Q. REGARDING THE ASH POND CLOSURE COSTS ALREADY INCURRED OR EXPECTED TO BE INCURRED PRIOR TO DECEMBER 2018, WHAT DO THOSE COSTS COMPRISE AND WHY ARE THEY REASONABLE AND PRUDENT COSTS?

A. In Kerin Revised Exhibit 10, I have broken these costs down into their core components and have described the plants to which these costs apply. In detailing these costs, I have also provided narrative summaries as to why these costs were incurred and why the compliance actions that led to those costs were the most reasonable and cost-effective options given the applicable facts and circumstances. This exhibit, coupled with the balance of my testimony and exhibits, demonstrate that these costs are reasonable and prudent.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Duke Energy Corporation
Summary of Ash Beneficiation for Duke Energy Progress
2015 , 2016, 2017 and 2018 January to September

2015	DEP
Ash Produced	602,576
Production Ash Reused	170,267
Ash Sluiced	171,663
Ash Landfilled	579,896
Ash to Structural Fill	44,374
Reclaimed Ash for Beneficial Reuse	354,117
2016	**DEP**
Ash Produced	491,252
Production Ash Reused	99,686
Ash Sluiced	230,295
Ash Landfilled	434,198
Ash to Structural Fill	640
Reclaimed Ash for Beneficial Reuse	-
2017	**DEP**
Ash Produced	349,679
Production Ash Reused	81,993
Ash Sluiced	150,024
Ash Landfilled	742,407
Ash to Structural Fill	21
Reclaimed Ash for Beneficial Reuse	-
2018	**DEP**
Ash Produced	284,478
Production Ash Reused	153,873
Ash Sluiced	117,743
Ash Landfilled	777,360
Ash to Structural Fill	0
Reclaimed Ash for Beneficial Reuse	0

DEC - 2018	January	February	March	April	May	June	July	August	September	October	November	December	YTD
ALLEN STATION													
DRY FLY ASH PRODUCED	13,160.32	284.45	0.00	217.82	2,844.53	4,286.40	882.86	1,569.10	5,622.72	0.00	0.00	0.00	28,868.19
DRY BOTTOM ASH PRODUCED	1,668.21	36.06	0.00	27.61	360.57	543.35	111.91	198.90	712.74	0.00	0.00	0.00	3,659.35
TOTAL ASH PRODUCED	14,828.52	320.50	0.00	245.43	3,205.11	4,829.74	994.77	1,768.00	6,335.46	0.00	0.00	0.00	32,527.53
ASH SLUICED TO POND	1,668.21	36.06	0.00	27.61	360.57	543.35	111.91	198.90	712.74	0.00	0.00	0.00	3,659.35
ASH LANDFILLED *	21,499.93	904.99	0.00	0.00	4,439.61	4,330.03	1,533.75	957.72	5,500.64	0.00	0.00	0.00	39,166.67
CENOSPHERES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE	16.40	0.00	0.00	0.00	0.00	0.00	13.80	0.00	0.00	0.00	0.00	0.00	30.20
STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED TO STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BELEWS CREEK STATION													
DRY FLY ASH PRODUCED	40,175.40	7,400.16	22,950.20	650.82	29,213.17	31,544.11	25,169.87	29,198.62	19,973.89	0.00	0.00	0.00	206,276.24
DRY BOTTOM ASH PRODUCED	5,092.66	938.05	2,909.18	82.50	3,703.08	3,998.55	3,190.55	3,701.23	2,531.90	0.00	0.00	0.00	26,147.69
TOTAL ASH PRODUCED	45,268.06	8,338.21	25,859.38	733.32	32,916.25	35,542.66	28,360.42	32,899.85	22,505.79	0.00	0.00	0.00	232,423.94
ASH SLUICED TO POND	5,092.66	938.05	2,909.18	82.50	3,703.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12,725.46
ASH LANDFILLED *	18,502.55	431.13	0.00	25.17	9,639.52	14,859.13	6,242.89	7,710.43	3,017.04	0.00	0.00	0.00	60,427.86
CENOSPHERES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE	14,926.42	23,536.85	12,241.06	13,549.26	17,749.58	23,845.10	24,553.02	27,792.31	16,515.41	0.00	0.00	0.00	174,709.01
STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CLIFFSIDE STATION													
DRY FLY ASH PRODUCED	21,466.11	9,500.75	13,764.27	11,322.83	9,955.50	17,673.16	17,807.84	14,014.92	15,589.66	0.00	0.00	0.00	131,095.04
DRY BOTTOM ASH PRODUCED	2,414.94	1,068.83	1,548.48	1,273.82	1,119.99	1,988.23	2,003.38	1,576.68	1,753.84	0.00	0.00	0.00	14,748.19
TOTAL ASH PRODUCED	21,466.11	9,500.75	13,764.27	11,322.83	9,955.50	17,673.16	17,807.84	14,014.92	15,589.66	0.00	0.00	0.00	131,095.04
ASH SLUICED TO POND	900.95	267.64	284.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,453.10
ASH LANDFILLED *	33,192.08	22,715.77	21,350.74	22,743.95	20,581.36	30,865.75	32,403.35	25,969.41	23,827.62	0.00	0.00	0.00	233,650.03
CENOSPHERES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STRUCTURAL FILL ASH	2,927.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,927.28
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MARSHALL STATION													
DRY FLY ASH PRODUCED	28,998.83	10,156.10	17,301.55	22,519.73	22,144.80	26,480.77	22,008.85	23,633.68	29,921.49	0.00	0.00	0.00	203,165.81
DRY BOTTOM ASH PRODUCED	3,675.91	1,287.39	2,193.15	2,854.61	2,807.09	3,356.72	2,789.85	2,995.82	3,792.86	0.00	0.00	0.00	25,753.41
TOTAL ASH PRODUCED	32,674.74	11,443.49	19,494.71	25,374.34	24,951.89	29,837.49	24,798.71	26,629.50	33,714.35	0.00	0.00	0.00	228,919.22
ASH SLUICED TO POND	3,675.91	1,287.39	2,193.15	2,854.61	2,807.09	3,356.72	2,789.85	2,995.82	3,792.86	0.00	0.00	0.00	25,753.41
ASH LANDFILLED *	46,024.39	14,083.86	26,029.68	28,176.24	30,376.85	37,289.93	33,020.90	38,846.08	37,720.27	0.00	0.00	0.00	291,568.20
Fly Ash Sales	179.71	503.24	2,026.39	4,616.26	3,337.12	848.24	0.00	999.93	1,763.80	0.00	0.00	0.00	14,274.69
ASH BENEFICIAL REUSE	2,453.43	3,259.54	3,217.90	3,590.24	1,954.65	2,682.67	1,915.20	383.27	133.06	0.00	0.00	0.00	19,589.96
STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Ash Produced	**639,714**	**percent reuse**	**33%**
Production Ash Reused	**208,604**		
Ash Sluiced	43,591		

Ash Landfilled	624,813
Ash to Structural Fill	2,927
Reclaimed Ash for Beneficial Reuse	0

DEP - 2018													
ASHEVILLE STATION													
DRY FLY ASH PRODUCED	6,023.16	3,286.44	3,786.77	4,309.87	1,873.43	3,733.89	2,562.80	3,121.23	6,575.05	0.00	0.00	0.00	35,272.64
DRY BOTTOM ASH PRODUCED	763.50	416.59	480.01	546.32	237.48	473.31	324.86	395.65	833.46	0.00	0.00	0.00	4,471.18
TOTAL ASH PRODUCED	6,786.66	3,703.03	4,266.78	4,856.20	2,110.90	4,207.20	2,887.66	3,516.88	7,408.51	0.00	0.00	0.00	39,743.82
ASH SLUICED TO POND	6,786.66	3,703.03	4,266.78	4,856.20	2,110.90	4,207.20	2,887.66	3,516.88	7,408.51	0.00	0.00	0.00	39,743.82
ASH LANDFILLED *	61,572.00	66,951.00	74,475.00	73,943.00	73,114.00	69,176.00	68,529.00	71,109.00	57,539.00	0.00	0.00	0.00	616,408.00
CENOSPHERES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED TO STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAYO STATION													
DRY FLY ASH PRODUCED	11,012.93	2,673.05	3,585.49	7,060.44	5,054.10	7,246.97	5,802.37	5,850.37	2,181.39	0.00	0.00	0.00	50,467.12
DRY BOTTOM ASH PRODUCED	1,396.01	338.84	454.50	894.99	640.66	918.63	735.51	741.60	276.51	0.00	0.00	0.00	6,397.24
TOTAL ASH PRODUCED	12,408.94	3,011.89	4,039.99	7,955.43	5,694.76	8,165.60	6,537.88	6,591.97	2,457.91	0.00	0.00	0.00	56,864.36
ASH SLUICED TO POND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH LANDFILLED *	13,368.25	4,690.68	2,989.12	7,635.11	8,231.33	9,615.10	7,131.25	6,677.87	3,413.51	0.00	0.00	0.00	63,752.22
CENOSPHERES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE	25.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.22
STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH TO STRUCTURAL FILL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ROXBORO STATION													
DRY FLY ASH PRODUCED	33,660.35	8,685.34	10,757.48	6,830.21	11,806.80	26,646.24	22,806.21	27,137.66	18,403.82	0.00	0.00	0.00	166,734.11
DRY BOTTOM ASH PRODUCED	4,266.80	1,100.96	1,363.62	865.80	1,496.64	3,377.69	2,890.93	3,439.98	2,332.88	0.00	0.00	0.00	21,135.31
TOTAL ASH PRODUCED	37,927.15	9,786.29	12,121.11	7,696.02	13,303.44	30,023.93	25,697.13	30,577.64	20,736.70	0.00	0.00	0.00	187,869.42
ASH SLUICED TO POND	4,266.80	1,100.96	1,363.62	865.80	1,496.64	3,377.69	2,890.93	3,439.98	2,332.88	0.00	0.00	0.00	21,135.31
ASH LANDFILLED *	46,123.36	13,824.89	0.00	0.00	39.00	1,993.69	28,910.70	6,308.50	0.00	0.00	0.00	0.00	97,200.14
CENOSPHERES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE	9,474.32	20,580.87	20,325.65	9,797.48	12,372.67	34,343.49	4,148.71	38,685.98	4,118.34	0.00	0.00	0.00	153,847.51
STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH TO STRUCTURAL FILL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

DEP			
Ash Produced	**284,478**	**percent reuse**	**54%**
Production Ash Reused	**153,873**		

Ash Sluiced	117,743
Ash Landfilled	777,360
Ash to Structural Fill	0
Reclaimed Ash for Beneficial Reuse	0

Combined		**924,192**				**percent reuse**		**39%**			
Production Ash Reused		**362,477**									
DEP & DEC	Total CCP Produced	336,469	103,577	166,874	125,970	193,013	277,643	243,537	252,248	223,794	1,923,124
	Total CCP Reused	115,879	119,340	128,544	125,684	142,190	159,601	123,971	162,592	115,892	1,193,691
	% Ash Reuse	29%	136%	80%	104%	74%	71%	59%	91%	33%	66%
	% Gypsum Reuse	54%	124%	104%	139%	106%	66%	68%	70%	81%	82%
	% Total CCP Reuse	34%	115%	77%	100%	74%	57%	51%	64%	52%	62%

2018 CCP through September Utilization

* Ash Landfilled represent the moist tons of CCR's weighed and placed in the landfills monthly.

DEC - 2017	January	February	March	April	May	June	July	August	September	October	November	December	YTD
ALLEN STATION													
DRY FLY ASH PRODUCED	5,957.59	265.33	1,302.32	1,969.70	1,853.17	1,405.60	9,522.30	4,938.00	5,074.20	4,642.83	61.82	1,912.35	38,858.33
DRY BOTTOM ASH PRODUCED	1,489.40	66.33	325.58	492.43	463.29	351.40	2,380.58	1,234.50	1,268.55	1,160.71	15.45	478.09	9,714.58
TOTAL ASH PRODUCED	7,446.99	331.67	1,627.90	2,462.13	2,316.46	1,756.99	11,902.88	6,172.50	6,342.75	5,803.54	77.27	2,390.44	48,572.92
ASH SLUICED TO POND	1,489.40	66.33	325.58	492.43	463.29	351.40	2,380.58	1,234.50	1,268.55	1,160.71	15.45	478.09	9,714.58
ASH LANDFILLED *	11,109.86	0.00	0.00	0.00	0.00	3,429.37	15,127.94	6,209.12	9,170.28	7,277.13	445.23	1,582.91	54,351.84
CENOSPHERES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE	0.00	0.00	0.00	0.00	0.00	0.00	11.00	8.40	16.00	0.00	7.00	0.00	42.40
STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED TO STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BELEWS CREEK STATION													
DRY FLY ASH PRODUCED	17,294.87	5,609.64	36,029.14	36,213.95	35,287.89	38,204.68	46,697.95	42,290.07	14,735.02	8,312.78	12,791.37	25,680.51	316,764.98
DRY BOTTOM ASH PRODUCED	2,137.57	693.33	4,453.04	4,475.88	4,361.42	4,721.93	5,771.66	5,226.86	1,821.18	1,027.42	1,580.96	3,174.00	39,150.73
TOTAL ASH PRODUCED	19,432.44	6,302.96	40,482.18	40,689.83	39,649.31	42,926.61	52,469.60	47,516.93	16,556.20	9,340.21	14,372.33	28,854.51	355,915.70
ASH SLUICED TO POND	2,137.57	693.33	4,453.04	4,475.88	4,361.42	4,721.93	5,771.66	5,226.86	1,821.18	1,027.42	1,580.96	3,174.00	39,150.73
ASH LANDFILLED *	1,811.88	0.00	0.00	4,078.79	0.00	2,751.48	9,648.96	10,089.52	1,286.10	1,797.77	1,283.65	934.39	36,967.44
CENOSPHERES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE	18,561.31	13,184.26	15,256.10	29,149.77	39,396.99	44,077.97	36,172.89	38,594.58	26,987.54	12,504.09	7,707.05	14,509.64	296,860.70
STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CLIFFSIDE STATION													
DRY FLY ASH PRODUCED	18,402.12	11,325.73	11,598.71	17,842.57	13,817.34	12,358.88	19,777.55	13,030.61	12,062.26	12,976.17	5,848.19	6,080.96	153,631.57
DRY BOTTOM ASH PRODUCED	2,749.74	1,692.35	1,733.14	2,666.13	2,064.66	1,846.73	2,955.27	1,947.10	1,802.41	1,938.97	873.87	908.65	22,956.44
TOTAL ASH PRODUCED	21,151.86	13,018.08	13,331.85	20,508.70	15,882.00	14,205.60	22,732.82	14,977.72	13,864.67	14,915.13	6,722.06	6,989.61	176,588.01
ASH SLUICED TO POND	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH LANDFILLED *	33,099.37	24,825.12	15,782.71	20,557.95	16,109.47	24,058.21	25,373.08	22,259.94	20,070.15	20,901.84	7,948.93	4,345.22	233,503.76
CENOSPHERES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STRUCTURAL FILL ASH	9,056.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MARSHALL STATION													
DRY FLY ASH PRODUCED	26,424.92	17,322.00	19,735.39	15,963.89	16,936.24	25,100.98	31,730.68	27,939.32	19,349.41	22,508.16	22,402.27	23,386.95	267,556.15
DRY BOTTOM ASH PRODUCED	4,663.22	3,056.82	3,482.72	2,817.16	2,988.75	4,429.59	5,599.53	4,930.47	3,414.60	3,972.03	3,953.34	4,127.11	47,215.79
TOTAL ASH PRODUCED	31,088.14	20,378.83	23,218.10	18,781.05	19,924.99	29,530.57	37,330.22	32,869.79	22,764.01	26,480.19	26,355.61	27,514.06	314,771.94
ASH SLUICED TO POND	4,663.22	3,056.82	3,482.72	2,817.16	2,988.75	4,429.59	5,599.53	4,930.47	3,414.60	3,972.03	3,953.34	4,127.11	47,215.79
ASH LANDFILLED *	38,414.43	26,400.90	29,118.70	21,403.17	26,402.20	40,062.61	46,098.72	43,458.20	26,454.49	31,874.92	30,777.95	35,482.25	395,948.54
Fly Ash Sales	700.63	3,651.72	2,073.63	26.55	49.31	0.00	0.00	0.00	1,082.20	2,747.06	3,239.47	810.88	12,786.66
ASH BENEFICIAL REUSE	4,097.28	7,114.85	4,196.25	707.28	1,611.82	2,029.69	1,097.52	2,196.04	3,372.57	4,927.44	4,811.74	2,090.06	37,210.07
STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED STRUCTURAL FILL ASH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Ash Produced	**895,849**	**percent reuse**	**39%**
Production Ash Reused	**346,900**		
Ash Sluiced	96,081		
Ash Landfilled	720,772		
Ash to Structural Fill	0		
Reclaimed Ash for Beneficial Reuse	0		

DEP - 2017													
ASHEVILLE STATION													
DRY FLY ASH PRODUCED	5,748.19	3,366.01	4,617.36	2,566.12	2,399.28	3,615.61	4,888.30	3,921.04	1,810.48	2,831.70	1,976.28	4,258.29	41,998.66
DRY BOTTOM ASH PRODUCED	728.64	841.50	1,154.34	641.53	599.82	903.90	1,222.07	980.26	452.62	707.93	494.07	1,064.57	9,791.26
TOTAL ASH PRODUCED	6,476.83	4,207.51	5,771.71	3,207.65	2,999.10	4,519.52	6,110.37	4,901.30	2,263.10	3,539.63	2,470.35	5,322.86	51,789.92

ASH SLUICED TO POND		6,476.83	4,207.51	5,771.71	3,207.65	2,999.10	4,519.52	6,110.37	4,901.30	2,263.10	3,539.63	2,470.35	5,322.86	51,789.92
ASH LANDFILLED *		42,948.00	40,908.00	45,883.00	34,265.00	19,441.00	40,544.00	34,635.00	36,147.00	25,538.00	26,062.00	28,172.00	48,652.00	443,305.00
CENOSPHERES		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
STRUCTURAL FILL ASH		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED TO STRUCTURAL FILL ASH		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAYO STATION														
DRY FLY ASH PRODUCED		4,139.93	2,631.78	4,893.54	1,729.87	924.58	4,714.66	6,994.95	7,087.42	872.14	1,316.21	0.00	5,230.44	40,535.52
DRY BOTTOM ASH PRODUCED		524.78	657.95	1,223.38	432.47	231.14	1,178.67	1,748.74	1,771.86	218.03	329.05	0.00	1,307.61	9,623.68
TOTAL ASH PRODUCED		4,664.72	3,289.73	6,116.92	2,162.34	1,155.72	5,893.33	8,743.69	8,859.28	1,090.17	1,645.27	0.00	6,538.04	50,159.20
ASH SLUICED TO POND		524.78	657.95	1,223.38	432.47	231.14	1,178.67	1,748.74	1,771.86	218.03	329.05	0.00	1,307.61	9,623.68
ASH LANDFILLED *		5,067.78	5,467.46	4,961.15	4,619.17	2,114.14	7,604.00	9,749.22	11,102.20	2,571.67	0.00	0.00	0.00	53,256.79
CENOSPHERES		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE		0.00	451.42	46.40	90.31	0.00	0.00	0.00	0.00	0.00	21.80	0.00	0.00	609.93
STRUCTURAL FILL ASH		0.00	0.00	0.00	0.00	0.00	21.28	0.00	0.00	0.00	0.00	0.00	0.00	21.28
RECLAIMED ASH		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH TO STRUCTURAL FILL		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ROXBORO STATION														
DRY FLY ASH PRODUCED		14,920.62	2,823.78	11,832.69	9,750.31	8,339.45	19,203.35	35,510.58	30,362.92	20,486.68	11,498.44	11,544.59	20,911.50	199,655.07
DRY BOTTOM ASH PRODUCED		1,891.35	705.95	2,958.17	2,437.58	2,084.86	4,800.84	8,877.65	7,590.73	5,121.67	2,874.61	2,886.15	5,227.88	48,074.96
TOTAL ASH PRODUCED		16,811.97	3,529.73	14,790.86	12,187.89	10,424.31	24,004.18	44,388.23	37,953.65	25,608.35	14,373.05	14,430.74	26,139.38	247,730.02
ASH SLUICED TO POND		1,891.35	705.95	2,958.17	2,437.58	2,084.86	4,800.84	8,877.65	7,590.73	5,121.67	2,874.61	2,886.15	5,227.88	48,074.96
ASH LANDFILLED *		14,178.16	6,098.63	8,909.10	0.00	0.00	0.00	51,563.62	41,682.69	25,409.35	12,234.86	14,043.91	21,112.75	245,845.33
CENOSPHERES		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ASH BENEFICIAL REUSE		6,294.05	6,865.17	6,248.70	2,305.00	4,607.20	4,580.86	4,386.03	8,835.59	5,788.37	10,216.11	11,082.24	10,111.74	81,382.77
STRUCTURAL FILL ASH		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RECLAIMED ASH TO STRUCTURAL FILL		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEMPORARY ASH STORAGE		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

DEP

Ash Produced		**349,679**				**percent reuse**		**23%**						
Production Ash Reused		**81,993**												
Ash Sluiced		150,024												
Ash Landfilled		742,407												
Ash to Structural Fill		21												
Reclaimed Ash for Beneficial Reuse		0												
Combined		**1,245,528**				**percent reuse**		**34%**						
Production Ash Reused		**428,893**												
DEP & DEC	Total CCP Produced	205,099	115,490	196,978	182,369	182,518	237,444	360,817	321,788	189,994	149,954	125,239	181,423	2,449,115
	Total CCP Reused	158,110	124,842	140,953	149,945	165,308	180,372	168,900	198,210	155,099	170,276	156,683	149,953	1,918,651
	% Ash Reuse	27%	51%	24%	34%	49%	41%	25%	37%	55%	75%	76%	53%	42%
	% Gypsum Reuse	131%	156%	126%	133%	134%	113%	69%	84%	105%	153%	177%	120%	116%
	% Total CCP Reuse	77%	108%	72%	82%	91%	76%	47%	62%	82%	114%	125%	83%	78%

2017 CCP December Utilization Station Health Final w 2016 correctionsJWJ

* Ash Landfilled represent the moist tons of CCR's weighed and placed in the landfills monthly.

WASTE	REUSE	RECLAIM	TOTAL GYPSUM	TEMPORARY ST(	All units in tons

DEC - 2016	January	February	March	April	May	June	July	August	September	October	November	December	YTD
ALLEN STATION													
DRY FLY ASH PRODUCED	5,145	5,976	3,603	1,169	262	6,750	13,580	14,335	8,844	1,828	0	2,222	63,714
DRY BOTTOM ASH PRODUCED	1,286	1,494	901	292	65	1,688	3,395	3,584	2,211	457	0	555	15,929
TOTAL ASH PRODUCED	6,432	7,470	4,504	1,461	327	8,438	16,975	17,919	11,055	2,285	0	2,777	79,643
ASH SLUICED TO POND	1,286	1,494	901	292	65	1,688	3,395	3,584	2,211	457	0	555	15,929
ASH LANDFILLED *	9,371	8,196	6,279	1,673	0	9,098	21,039	23,095	11,850	4,484	2,104	2,695	99,882
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	0	0	203	0	0	0	0	0	203	0	0	0	407
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED TO STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
BELEWS CREEK STATION													
DRY FLY ASH PRODUCED	40,446	24,995	8,976	12,012	21,045	40,799	36,523	43,867	48,809	26,262	19,037	25,265	348,038
DRY BOTTOM ASH PRODUCED	4,999	3,089	1,109	1,485	2,601	5,043	4,514	5,422	6,033	3,246	2,353	3,123	43,016
TOTAL ASH PRODUCED	45,445	28,084	10,086	13,497	23,646	45,842	41,037	49,289	54,841	29,508	21,390	28,388	391,054
ASH SLUICED TO POND	4,999	3,089	1,109	1,485	2,601	5,043	4,514	5,422	6,033	3,246	2,353	3,123	43,016
ASH LANDFILLED *	4,052	14,440	1,141	0	0	6,226	19,685	9,803	24,295	9,013	2,402	5,863	96,922
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	18,784	20,383	22,364	12,460	12,056	30,048	25,245	34,962	29,274	27,198	35,919	21,389	290,083
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
CLIFFSIDE STATION													
DRY FLY ASH PRODUCED	5,751	5,876	97	0	5,869	18,014	24,223	16,849	7,850	5,274	8,526	21,257	119,587
DRY BOTTOM ASH PRODUCED	859	878	14	0	877	2,692	3,620	2,518	1,173	788	1,274	3,176	17,869
TOTAL ASH PRODUCED	6,611	6,754	111	0	6,746	20,706	27,842	19,367	9,023	6,062	9,801	24,433	137,456
ASH SLUICED TO POND	1,472	2,776	111	0	877	7,135	13,142	6,527	1,173	2,021	2,318	9,432	46,985
ASH LANDFILLED *	2,701	0	0	0	6,298	23,717	20,506	21,803	11,161	9,637	5,141	27,084	128,049
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	2,701	10,844	0	0	0	0	0	0	0	0	0	0	13,546
STRUCTURAL FILL ASH	852	1,015	0	0	751	3,358	3,162	3,398	1,614	981	1,816	4,050	20,997
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
MARSHALL STATION													
DRY FLY ASH PRODUCED	30,253	22,370	19,482	18,396	14,602	28,041	35,788	31,835	21,799	25,408	14,538	24,533	287,047
DRY BOTTOM ASH PRODUCED	5,339	3,948	3,438	3,246	2,577	4,948	6,316	5,618	3,847	4,484	2,566	4,329	50,655
TOTAL ASH PRODUCED	35,592	26,318	22,920	21,642	17,179	32,990	42,104	37,453	25,646	29,891	17,104	28,862	337,702
ASH SLUICED TO POND	5,339	3,948	3,438	3,246	2,577	4,948	6,316	5,618	3,847	4,484	2,566	4,329	50,655
ASH LANDFILLED *	40,743	35,814	28,184	23,300	19,212	45,926	48,723	51,149	29,464	33,032	23,569	44,833	423,950
Fly Ash Sales	0	0	0	1,029	2,750	1,786	600	769	1,026	2,492	1,462	1,361	13,275
ASH BENEFICIAL REUSE	2,229	2,152	1,564	3,587	3,666	4,226	2,690	3,721	3,441	6,211	6,846	4,407	44,739
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0

Ash Produced	**945,854**	**percent reuse**	**38%**
Production Ash Reused	**362,050**		
Ash Sluiced	156,584		

Ash Landfilled	748,803
Ash to Structural Fill	20,997
Reclaimed Ash for Beneficial Reuse	0

DEP - 2016													
ASHEVILLE STATION													
DRY FLY ASH PRODUCED	5,439	5,336	2,924	1,917	2,415	3,321	6,354	7,883	3,370	2,355	4,299	5,730	51,342
DRY BOTTOM ASH PRODUCED	690	1,334	731	479	604	830	1,588	1,971	842	589	1,075	1,433	12,165
TOTAL ASH PRODUCED	6,129	6,670	3,655	2,396	3,018	4,151	7,942	9,854	4,212	2,944	5,373	7,163	63,507
ASH SLUICED TO POND	6,129	6,670	3,655	2,396	3,018	4,151	7,942	9,854	4,212	2,944	5,373	7,163	63,507
ASH LANDFILLED *	0	0	0	0	0	0	0	0	0	0	0	0	0
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	0	0	0	0	0	0	0	0	0	0	0	0	0
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED TO STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYO STATION													
DRY FLY ASH PRODUCED	8,987	5,932	1,802	2,018	6,920	8,687	13,661	13,507	12,525	3,405	4,873	3,040	85,358
DRY BOTTOM ASH PRODUCED	1,139	1,483	451	505	1,730	2,172	3,415	3,377	3,131	851	1,218	760	20,232
TOTAL ASH PRODUCED	10,126	7,415	2,253	2,523	8,650	10,859	17,077	16,884	15,656	4,256	6,091	3,800	105,590
ASH SLUICED TO POND	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH LANDFILLED *	9,420	5,093	2,958	1,214	5,896	10,278	13,912	16,766	14,589	4,868	6,809	5,926	97,730
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	276	950	253	0	301	0	0	0	0	0	675	0	2,455
STRUCTURAL FILL ASH	0	67	25	42	0	138	144	136	43	44	0	0	640
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH TO STRUCTURAL FILL	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
ROXBORO STATION													
DRY FLY ASH PRODUCED	32,792	18,547	2,006	9,423	11,787	34,943	45,138	38,708	29,908	19,192	6,506	12,008	260,957
DRY BOTTOM ASH PRODUCED	4,157	4,637	502	2,356	2,947	8,736	11,284	9,677	7,477	4,798	1,626	3,002	61,198
TOTAL ASH PRODUCED	36,949	23,183	2,508	11,779	14,734	43,679	56,422	48,386	37,384	23,990	8,132	15,010	322,155
ASH SLUICED TO POND	4,157	4,637	502	2,356	2,947	8,736	11,284	9,677	7,477	4,798	1,626	3,002	61,198
ASH LANDFILLED *	29,132	23,051	4,441	7,499	13,304	38,736	54,017	46,348	40,676	34,034	9,133	36,096	336,468
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	7,475	11,931	4,132	1,919	8,762	11,428	14,099	12,038	9,082	9,975	2,558	3,833	97,231
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH TO STRUCTURAL FILL	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0

DEP			
Ash Produced	**491,252**	**percent reuse**	**20%**
Production Ash Reused	**99,686**		

Ash Sluiced		230,295													
Ash Landfilled *		434,198													
Ash to Structural Fill		640													
Reclaimed Ash for Beneficial Reuse		0													
Combined		**1,437,106**				**percent reuse**		**32%**							
Production Ash Reused		**461,736**													
DEP & DEC	Total CCP Produced	264,509	213,060	100,026	89,106	136,286	306,452	402,028	400,233	326,645	216,450	143,589	219,155	2,817,538	
Portion added 6/1/2017 as a results of a request for the backup to the summary document JWJ	Total CCP Reused	145,297	188,534	151,834	130,162	147,421	196,564	191,350	218,850	183,255	173,736	180,400	182,002	2,089,403	
	% Ash Reuse	22%	45%	62%	36%	38%	31%	22%	28%	28%	47%	73%	32%	34%	
	% Gypsum Reuse	96%	132%	228%	310%	192%	104%	75%	81%	82%	108%	173%	135%	116%	
	% Total CCP Reuse	55%	88%	152%	146%	108%	64%	48%	55%	56%	80%	126%	83%	74%	74.16%
Data from Beneficial Reuse File Server 2016 CCP Utilization DOE Index.xlsm															

* Ash Landfilled represent the moist tons of CCR's weighed and placed in the landfills monthly.

DEC - 2015	January	February	March	April	May	June	July	August	September	October	November	December	YTD
ALLEN STATION													
TOTAL ASH PRODUCED	6,704	20,818	4,101	0	3,031	15,995	45,504	16,883	3,823	899	72	695	118,524
ASH SLUICED TO POND	1,341	4,164	820	0	606	3,199	2,528	1,993	765	180	14	139	15,748
ASH LANDFILLED *	8,846	24,409	7,215	0	1,543	19,996	26,725	20,702	3,929	274	0	695	114,334
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	0	0	0	0	0	100	0	0	0	0	0	0	100
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED TO STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
BELEWS CREEK STATION													
TOTAL ASH PRODUCED	45,725	44,876	43,784	19,551	29,515	42,662	47,663	35,964	35,666	31,722	24,913	19,533	421,574
ASH SLUICED TO POND	4,875	4,936	4,816	1,937	3,247	4,693	5,243	3,281	3,923	3,489	2,668	2,149	45,258
ASH LANDFILLED *	8,054	34,166	15,195	3,042	2,824	3,030	7,449	5,731	0	4,357	4,165	351	88,365
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	15,061	11,186	26,639	30,599	30,253	49,099	34,271	35,486	31,310	21,639	21,189	29,013	335,746
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
CLIFFSIDE STATION													
TOTAL ASH PRODUCED	16,224	30,010	8,427	0	4,300	19,050	27,478	25,279	19,621	1,576	0	682	152,646
ASH SLUICED TO POND	1,905	10,112	1,739	0	-166	6,748	8,048	2,852	1,159	-40	-210	682	32,828
ASH LANDFILLED *	23,273	28,282	14,620	721	9,023	15,636	30,918	32,982	25,806	7,241	210	0	188,712
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	24	0	0	0	0	8,500	0	0	0	0	0	0	8,524
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
MARSHALL STATION													
TOTAL ASH PRODUCED	16,587	23,008	26,410	17,585	23,404	36,159	33,134	33,539	19,694	14,308	20,477	16,214	280,520
ASH SLUICED TO POND	2,488	3,451	3,962	2,638	3,511	5,424	4,970	5,031	2,954	2,146	3,071	2,432	42,078
ASH LANDFILLED *	49,968	32,959	42,631	20,495	20,590	44,189	42,051	41,155	26,811	17,470	24,934	26,654	389,908
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	0	0	288	2,504	3,114	8,950	3,015	3,591	2,988	3,612	1,439	2,064	31,565
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0

Ash Produced	**973,264**	**percent reuse**	**38.63%**
Production Ash Reused	**375,934**		
Ash Sluiced	135,912		
Ash Landfilled	781,320		
Ash to Structural Fill	0		
Reclaimed Ash for Beneficial Reuse	0		

DEP - 2015													
ASHEVILLE STATION													
TOTAL ASH PRODUCED	6,728	7,741	6,301	4,691	5,140	6,297	7,477	6,188	5,512	4,488	6,436	3,901	70,900
ASH SLUICED TO POND	6,728	7,741	6,301	4,691	5,140	6,297	7,477	6,188	5,512	4,488	6,436	3,901	70,900
ASH LANDFILLED *	0	0	0	0	0	0	0	6,188	5,512	4,488	6,436	3,901	26,525
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	0	0	0	0	0	0	0	0	0	0	0	0	0
STRUCTURAL FILL ASH	6,728	7,741	6,301	4,691	5,140	6,297	7,477	0	0	0	0	0	44,374
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED TO STRUCTURAL FILL ASH	45,458	30,696	65,962	59,564	63,143	78,492	10,802	0	0	0	0	0	354,117
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
MAYO STATION													
TOTAL ASH PRODUCED	17,969	12,483	5,380	16,148	17,092	17,152	18,239	16,278	10,647	6,377	8,112	2,476	148,353
ASH SLUICED TO POND	2,022	2,497	1,076	3,230	3,418	3,430	3,648	3,256	2,129	1,275	1,622	495	28,098
ASH LANDFILLED *	18,530	17,886	4,717	18,346	23,362	25,445	25,794	14,287	12,232	5,481	14,039	3,109	183,229
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	0	0	0	0	0	929	1,385	871	868	261	317	2,700	7,331
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH TO STRUCTURAL FILL	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0
ROXBORO STATION													
TOTAL ASH PRODUCED	45,708	52,158	34,987	13,164	33,547	46,040	51,986	45,829	22,507	16,601	9,865	10,931	383,323
ASH SLUICED TO POND	5,142	10,432	6,997	2,633	6,709	9,208	10,397	9,166	4,501	3,320	1,973	2,186	72,665
ASH LANDFILLED *	45,434	49,669	35,967	9,694	26,878	45,782	51,645	47,136	17,570	19,155	14,890	6,323	370,142
CENOSPHERES	0	0	0	0	0	0	0	0	0	0	0	0	0
ASH BENEFICIAL REUSE	16,265	11,958	15,861	13,282	13,001	19,087	20,249	15,110	13,730	9,660	6,886	7,848	162,936
STRUCTURAL FILL ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH	0	0	0	0	0	0	0	0	0	0	0	0	0
RECLAIMED ASH TO STRUCTURAL FILL	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMPORARY ASH STORAGE	0	0	0	0	0	0	0	0	0	0	0	0	0

Ash Produced	**602,576**	**percent reuse**	**28%**
Production Ash Reused	**170,267**		
Ash Sluiced	171,663		
Ash Landfilled	579,896		
Ash to Structural Fill	44,374		
Reclaimed Ash for Beneficial Reuse	354,117		

* Ash Landfilled represent the moist tons of CCR's weighed and placed in the landfills monthly.

Duke Energy Progress

Breakdown of Compliance Spend by site, July 1, 2016 through September 30, 2018

All numbers presented on a system basis

Site	2016-2018 compliance spend	Type of spend	Legal justification for spend	Spend justification
Asheville	$ 120,246,520	CAMA and CCR wells; waste water management & treatment; EHS groundwater; contractor mobilization, demobilization & site preparation; truck scale installation; sluice line demolition; DOT road resurfacing; land purchase; construction of permanent power building for water management & treatment; dewatering operations; interim water treatment system; ash excavation, transportation, & storage; 1982 dam decommissioning and grading; wetland delineation report; engineering for permanent power dewatering system; ash basin closure & landfill development engineering; water management options anaylsis engineering; planning and overhead	40 CFR 257.102(b) 40 CFR 257.60 40 CFR 257.61 40 CFR 257.101(b)(1) 40 CFR 257.102(e)(1) CAMA §§ 3.(b) and 3.(c) Order Granting Motion for Partial Summary Judgment dated June 1, 2016 (13-CVS-4061)	Asheville is subject to the CCR rule provisions requiring basin closure. 40 CFR § 257.102(b) required a written closure plan by October 17, 2016. On October 12, 2018, it was determined that the 1964 ash basin at Asheville did not meet the wetlands location restriction (40 § CFR 257.61) and the uppermost aquifer location restriction (40 CFR § 257.60). This results in the Asheville 1964 ash basin being required to commence closure pursuant to 40 CFR § 257.101(b)(1). On August 30, 2016, the placement of wastestreams in the Asheville 1982 ash basin ceased and closure of the basin commenced pursuant to 40 CFR § 257.102(e)(1)(i). Pursuant to ¶ 5.e. of the Order Granting Motion for Partial Summary Judgment dated June 1, 2016 (13-CVS-4061), a written Site Analysis and Removal Plan was due by December 31, 2016. Sections 3.(b) and 3.(c) of CAMA require excavation of the Asheville basins, with the ash disposed of in either an off-site or on-site landfill. (Asheville is a high-priority site, with ash basin closure required by August 2022, which is an extended closure date allowed by the Mountain Energy Act.)
Cape Fear	$ 22,025,869	CCR wells; dam stability; EHS groundwater & permitting; ash beneficiation; dewatering operations; water treatment system; dewatering engineering plans;wetland delineation report; closure plan;basin closure engineering;planning and overheads.	Amended Order Granting Motion for Partial Summary Judgment dated June 9, 2017 (13-CVS-11032) HB 630 §§ 3.(a) and 3.(b) CAMA §§ 130A-309.214 HB 630 §§ 130A-309.216	Cape Fear is not currently subject to the CCR rule provisions requiring basin closure. However, in response to the United States Court of Appeals for the District of Columbia Circuit's August 21, 2018 decision in *USWAG v. EPA* (No. 15-1219), EPA is expected to undertake a rulemaking that would regulate inactive impoundments at closed power plants, including the basins at Cape Fear that were inactive as of the effective date of the CCR rule. Pursuant to the Amended Order Granting Motion for Partial Summary Judgment dated June 9, 2017 (13-CVS-11032), the Cape Fear site must be excavated within 10 years of receiving the applicable permits. In addition, § 3.(a) of HB 630 deems the surface impoundments at Cape Fear intermediate-risk and provides that they must be closed by excavation in accordance with § 3.(b) no later than August 1, 2028. Given these requirements, it is imperative to begin engineering and project planning at the current time to ensure completion by the required date. Closure plan preparation and submission is required by CAMA. Dewatering/water treatment are necessary to prepare ash basins for excavation. NC House Bill 630 mandated that three sites be identified for ash beneficiation (NCGS § 130A-309-216). Cape Fear was chosen as one of those sites.

Duke Energy Progress

Breakdown of Compliance Spend by site, July 1, 2016 through September 30, 2018

All numbers presented on a system basis

Site	2016-2018 compliance spend	Type of spend	Legal justification for spend	Spend justification
H.F. Lee	42,214,672	CAMA & CCR wells; dam stability; EHS groundwater & permitting; ash beneficiation; landfill; planning and overheads; bulk dewatering system; dewatering operations; dewatering engineering;wetland delineation report; closure plan development; basin closure engineering	40 CFR 257.102(b) 40 CFR 257.60 40 CFR 257.61 40 CFR 257.101(b)(1) Amended Order Granting Motion for Partial Summary Judgment dated June 9, 2017 (13-CVS-11032) HB 630 §§ 3.(a) and 3.(b) CAMA §§ 130A-309.214 HB 630 §§ 130A-309.211(c1) and .216	H.F. Lee's Active Basin is subject to the CCR rule provisions requiring basin closure, while Basins 1 through 3 are not subject to the CCR rule. 40 CFR § 257.102(b) required a written closure plan by October 17, 2016. On October 15, 2018, it was determined that the active ash basin at H.F. Lee did not meet the wetlands location restriction (40 CFR § 257.61) and the uppermost aquifer location restriction (40 CFR § 257.60). This results in the HF Lee active ash basin being required to commence closure pursuant to 40 CFR § 257.101(b)(1) on April 15, 2019. Pursuant to the Amended Order Granting Motion for Partial Summary Judgment dated June 9, 2017 (13-CVS-11032), the H.F. Lee site must be excavated within twelve years of the date of the order. In addition, § 3.(a) of HB 630 deems the surface impoundments at H.F. Lee intermediate-risk and provides that they must be closed by excavation in accordance with § 3.(b) no later than August 1, 2028. Given these requirements, it is imperative to begin engineering and project planning at the current time to ensure completion by the required date. Closure plan preparation and submission is required by CAMA. Dewatering/water treatment are necessary to prepare ash basins for excavation. NC House Bill 630 mandated that three sites be identified for ash beneficiation (NCGS § 130A-309-216). H.F. Lee was chosen as one of those sites. Pursuant to NCGS §§ 130A-309.211(c1), Duke Energy established permanent replacement water supplies to eligible households.
Mayo	$ 13,741,179	CAMA & CCR wells; dam stability; EHS groundwater & permitting; wetland delineation report;basin closure engineering; water evaluation engineering; planning and overheads	40 CFR 257.102(b) 40 CFR 257.60 40 CFR 257.101(b)(1) CAMA §§ 130A-309.213 and .214 HB 630 § 130A-309.211(c1)	Mayo is subject to the CCR rule provisions requiring basin closure. 40 CFR § 257.102(b) required a written closure plan by October 17, 2016. On October 11, 2018, it was determined that the ash basin, FGD Forward Settling Pond, and FGD Settling Pond at Mayo did not meet the uppermost aquifer location restriction (40 CFR § 257.60). This results in the Mayo ash basin, FGD Forward Settling Pond, and FGD Settling Pond being required to commence closure pursuant to 40 CFR § 257.101(b)(1)(i) no later than October 31, 2020. The Mayo plant is anticipating a low-risk ranking under CAMA in light of Duke Energy's completion of the dam safety activities required under NCGS § 130A-309.213(d)(1)b. and establishment of the permanent water supplies required under NCGS §§ 130A-309.211(c1) and 130A-309.213(d)(1)a. Engineering and project planning at the current time are needed to synchronize work between all of the coal ash sites being closed in the next 20 years, as well as to gain synergies between excavation/capping plans for all the sites. Closure plan preparation and submission is required by CAMA.

Duke Energy Progress

Breakdown of Compliance Spend by site, July 1, 2016 through September 30, 2018

All numbers presented on a system basis

Site	2016-2018 compliance spend	Type of spend	Legal justification for spend	Spend justification
Robinson	$ 6,850,071	CCR wells; storm water reroute; EHS groundwater & permitting; site preparation; planning and oversight;closure plan engineering; dewatering engineering; wetland delineation report	40 CFR 257.102(b) 40 CFR 257.60 40 CFR 257.101(b)(1) Consent Agreement dated July 17 , 2015 (15-23-HW)	Robinson is subject to the CCR rule provisions requiring basin closure. 40 CFR § 257.102(b) required a written closure plan by October 17, 2016. On October 12, 2018, it was determined that the ash basin at Robinson did not meet the uppermost aquifer location restriction (40 CFR § 257.60). This results in the Robinson ash basin being required to commence closure pursuant to 40 CFR § 257.101(b)(1)(i) no later than October 31, 2020. The Robinson plant is being excavated to a lined landfill pursuant to Consent Agreement (15-23-HW) with the South Carolina Department of Health and Environmental Control dated July 17, 2015.
Roxboro	$ 19,663,922	CAMA & CCR wells; alternate spillway; EHS groundwater & permitting; landfill cap in place activities; closure plan development	40 CFR 257.102(b) 40 CFR 257.60 40 CFR 257.61 40 CFR 257.101(b)(1) CAMA §§ 130A-309.213 and .214 HB 630 § 130A-309.211(c1)	Roxboro is subject to the CCR rule provisions requiring basin closure. 40 CFR § 257.102(b) required a written closure plan by October 17, 2016. On October 11, 2018, it was determined that the West Ash Pond at Roxboro did not meet the wetlands location restriction (40 CFR § 257.61) and the uppermost aquifer location restriction (40 CFR § 257.60). This results in the West Ash Pond at Roxboro being required to commence closure pursuant to 40 CFR § 257.101(b)(1) on April 11, 2019. On October 11, 2018, it was determined that the East Ash Pond at Roxboro did not meet the uppermost aquifer location restriction (40 CFR § 257.60). This results in the East Ash Pond being required to commence closure pursuant to 40 CFR § 257.101(b)(1)(i) no later than October 31, 2020. The East FGD Settling Pond, West FGD Settling Pond, and the FGD Forward Flush Pond have not triggered any closure requirements. The Roxboro plant is anticipating a low-risk ranking under CAMA in light of Duke Energy's completion of the dam safety activities required under NCGS § 130A-309.213(d)(1)b. and establishment of the permanent water supplies required under NCGS §§ 130A-309.211(c1) and 130A-309.213(d)(1)a. Engineering and project planning at the current time are needed to synchronize work between all of the coal ash sites being closed in the next 20 years, as well as to gain synergies between excavation/capping plans for all the sites. Closure plan preparation and submission are required by CAMA.

Duke Energy Progress

Breakdown of Compliance Spend by site, July 1, 2016 through September 30, 2018

All numbers presented on a system basis

Site	2016-2018 compliance spend	Type of spend	Legal justification for spend	Spend justification
Sutton	$ 187,736,005	CAMA & CCR wells; EHS groundwater & permitting; contractor mobilization & site preparation; rail and truck loading stations; road installation; waste water treatment plant; tipping fees;leachate removal; ash excavation & processing; construction of on-site landfill; planning and overheads; closure plan; waste water engineering;landfill engineering	40 CFR 257.101(b) 40 CFR 257.102(e)(1) CAMA §§ 3.(b) and 3.(c) Order Granting Motion for Partial Summary Judgment dated June 1, 2016 (13-CVS-11032)	Sutton is subject to the CCR rule provisions requiring basin closure. 40 CFR § 257.102(b) required a written closure plan by October 17, 2016. On July 6, 2016, the placement of wastestreams in the Sutton 1971 Basin and 1984 Basin ceased and closure of the basins commenced pursuant to 40 CFR § 257.102(e)(1)(i). Pursuant to ¶ 5.e. of the Order Granting Motion for Partial Summary Judgment dated June 1, 2016 (13-CVS-11032), a written Site Analysis and Removal Plan was due by December 31, 2016. Sections 3.(b) and 3.(c) of CAMA require excavation of the Sutton basins, with the ash disposed of in either an off-site or on-site landfill. (Sutton is a high-priority site, with ash basin closure required by August 1, 2019.)
Weatherspoon	$ 21,656,193	Road preparation and construction; equipment procurement; beneficiation; dewatering engineering plans; closure plan development; CAMA & CCR wells; dam stability; EHS groundwater & permitting; planning and overheads	40 CFR 257.102(b) 40 CFR 257.101(b)(2) Amended Order Granting Motion for Partial Summary Judgment dated June 9, 2017 (13-CVS-11032) HB 630 §§ 3.(a) and 3.(b) CAMA § 130A-309.214	Weatherspoon is subject to the CCR rule provisions requiring basin closure. 40 CFR § 257.102(b) required a written closure plan by October 17, 2016. It was determined that the 1979 ash basin at Weatherspoon did not meet the requirements of 40 C.F.R. § 257.73 (e)(1), resulting in the basin being required to commence closure pursuant to 40 CFR § 257.101(b)(2). On December 13, 2017, Duke Energy posted the initial notice of intent to close the Weatherspoon 1979 ash basin on its publicly accessible Web site. Pursuant to the Amended Order Granting Motion for Partial Summary Judgment dated June 9, 2017 (13-CVS-11032), the Weatherspoon site must be excavated within twelve years of the date of the order. In addition, § 3.(a) of HB 630 deems the surface impoundments at Weatherspoon intermediate-risk and provides that they must be closed by excavation in accordance with § 3.(b) no later than August 1, 2028. Given these requirements, it is imperative to begin engineering and project planning at the current time to ensure completion by the required date. Closure plan preparation and submission is required by CAMA.
Total - All Sites	**$ 434,134,431**			

Duke Energy Progress				
Breakdown of Compliance Spend by site, July 1, 2016 through September 30, 2018				
All numbers presented on a system basis				
Site	**2016-2018 compliance spend**	**Type of spend**	**Legal justification for spend**	**Spend justification**
Note:				
After the entry of summary judgment the HB630 amendments to CAMA codified this requirement. Session Law 2016-95, Section 3(a) and (b) (excerpted below). See references below in HB630 supporting the decision to excavate these sites.				
SECTION 3.(a) Notwithstanding G.S. 130A-309.213 or G.S. 130A-309.214, as amended by Section 1 of this act, and except as otherwise preempted by the requirements of federal law, the following coal combustion residuals surface impoundments shall be deemed intermediate-risk and, as soon as practicable, but no later than August 1, 2028, shall be closed in conformance with Section 3(b) of this act:				
(1) Coal combustion residuals surface impoundments located at the H.F. Lee Steam Station, owned and operated by Duke Energy Progress, and located in Wayne County.				
(2) Coal combustion residuals surface impoundments located at the Cape Fear Steam Station, owned and operated by Duke Energy Progress, and located in Chatham County.				
(3) Coal combustion residuals surface impoundments located at the Weatherspoon Steam Station, owned and operated by Duke Energy Progress, and located in New Hanover County.				
SECTION 3.(b) The impoundments identified in subsection (a) of this section shall be closed as follows:				
(1) Impoundments located in whole above the seasonal high groundwater table shall be dewatered. Impoundments located in whole or in part beneath the seasonal high groundwater table shall be dewatered to the maximum extent practicable.				
(2) All coal combustion residuals shall be removed from the impoundments and transferred for (i) disposal in a coal combustion residuals landfill, industrial landfill, or municipal solid waste landfill or (ii) use in a structural fill or other beneficial use as allowed by law. The use of coal combustion products (i) as structural fill shall be conducted in accordance with the requirements of Subpart 3 of Part 2I of Article 9 of the General Statutes and (ii) for other beneficial uses shall be conducted in accordance with the requirements of Section .1700 of Subchapter B of Chapter 13 of Title 15A of the North Carolina Administrative Code (Requirements for Beneficial Use of Coal Combustion By-Products) and Section .1200 of Subchapter T of Chapter 2 of Title 15A of the North Carolina Administrative Code (Coal Combustion Products Management), as applicable.				
(3) If restoration of groundwater quality is degraded as a result of the impoundment, corrective action to restore groundwater quality shall be implemented by the owner or operator as provided in G.S. 130A-309.211.				

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2018-318-E

In the Matter of:	)	
	)	
Application of Duke Energy Progress,	)	**DIRECT TESTIMONY OF**
LLC for Adjustments in Electric Rate	)	**KENDRA A. WARD FOR**
Schedules and Tariffs	)	**DUKE ENERGY PROGRESS, LLC**

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A. Yes. I testified before the Public Service Commission of South Carolina ("PSCSC" or "Commission") in two of DE Progress' fuel and environmental cost recovery proceeding, most recently in Docket No. 2018-1-E.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony supports the fuel component of proposed base rates for all customer classes. In addition, I support the fuel pro forma adjustment to the Company's revenue, operating expenses and rate base for the twelve-month period ending December 31, 2017 ("Test Period"), reflected in Bateman Exhibit 1.

Q. YOUR TESTIMONY INCLUDES ONE EXHIBIT. WAS WARD REVISED EXHIBIT 1 PREPARED BY YOU OR AT YOUR DIRECTION AND SUPERVISION?

A. Yes.

Q. DID YOU PROVIDE ANY INFORMATION INCLUDED IN EXHIBITS SPONSORED BY OTHER COMPANY WITNESSES?

A. Yes. I provided the proposed fuel rate and annualized fuel expense pro forma adjustments to the Company's Test Period operating expenses and rate base.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A. The remainder of my testimony is organized as follows:

II. BASE FUEL FACTORS

III. PRO FORMA ADJUSTMENTS

IV. CONCLUSION

II. BASE FUEL FACTORS

Q. WHAT BASE FUEL FACTORS DOES DUKE ENERGY PROGRESS PROPOSE TO USE IN THIS DOCKET?

A. The Company proposes to use the following base fuel factors by customer class (excluding gross receipts tax and regulatory fees):

- Residential 3.087 cents per kWh
- General Service-Non Demand 2.801 cents per kWh
- General Service-Demand 2.366 cents per kWh, 89 cents per KW[1]
- Lighting 2.366 cents per kWh

These proposed factors are equal to the total of the fuel, environmental, Distributed Energy Resource Program ("DERP") avoided costs, and the capacity related costs, including the Public Utility Regulatory Policies Act ("PURPA") purchased power capacity cost factors, by customer class approved in Docket No. 2018-1-E and implemented on July 1, 2018. These factors represent the fuel-related amounts that the Company is collecting from its South Carolina retail customers through its approved rates at the time of preparation of this filing.

Q. WHAT LEVEL OF FUEL COSTS HAS THE COMPANY INCLUDED IN COST OF SERVICE?

A. As shown on Ward Revised Exhibit 1, the Company's South Carolina retail adjusted fuel costs expense for the Test Period was $170,748,754. This amount was calculated using the base fuel cost factors identified above and South

[1] The environmental, DERP avoided costs, and capacity related components of fuel costs factors are billed on a cents per KW basis for General Service-Demand customers.

Carolina retail Test Period actual kWh sales by customer class, or the actual kW sales by customer class. The calculated expense was then adjusted to reflect the South Carolina retail level of line loss. I provided the amount necessary to adjust test period fuel expense to $170,748,754 to Witness Bateman and it is reflected it in the operating expenses shown on Bateman Exhibit 1, page 3.

Q. PLEASE EXPLAIN THE DERIVATION OF THE FUEL COST FACTORS BY CUSTOMER CLASS.

A. The fuel cost factors by customer class represent the most recently approved billing factors at the time the Company prepared its rate increase application and supporting exhibits in this proceeding. Specifically, these factors were approved by the Public Service Commission of South Carolina (the "Commission") in Docket No. 2018-1-E, and supported by the 2018 Ward Exhibits[2] filed in that proceeding. These factors were based on: (1) forecasted kWh sales for the billing period July 2018 through June 2019 and estimated fuel, environmental, DERP avoided costs, and capacity related costs to supply those sales, and (2) an adjustment for the under recovery from the preceding twelve-month period.

Q DOES THE USE OF THESE BASE FUEL FACTORS AFFECT THE COMPANY'S REQUESTED RATE INCREASE?

A. No. As described below, the Company's requested increase in revenues in this case is related to non-fuel revenues. There will be no change to customers' bills as a consequence of inclusion of these fuel cost factors in the Company's proposed base rates. The Company will continue to bill customers the fuel rates

[2] Ward Exhibits 1 through 15 filed in Docket No. 2018-1-E (collectively "2018 Ward Exhibits").

DUKE ENERGY PROGRESS, LLC
South Carolina Retail Adjusted Fuel and Fuel-Related Costs
Twelve Months Ended December 31, 2017

Line No.	Description	Residential - kWh (Col. 1)	General Service - Non-Demand - kWh (Col. 2)	General Service - Demand - kWh (Col. 3)	General Service - Demand - kW (Col. 4)	Lighting - kWh (Col. 5)	SC Retail (Col. 6)
1	SC retail sales, per books	2,018,334,046	289,722,475	3,832,007,982		83,415,291	6,223,479,794
2	General Service - Demand billed kW				8,068,070		
3	System fuel and fuel-related costs factors - cents per kWh	3.087	2.801	2.366		2.366	
4	System fuel and fuel-related costs factors - cents per kW				89		
5	Total SC retail fuel and fuel-related costs ($ 000)	$ 62,306	$ 8,115	$ 90,665	$ 7,181	$ 1,974	$ 170,241
8	SC retail line loss differential ($ 000)						$ 508
9	Total adjusted SC retail fuel and fuel-related costs ($000)						$ 170,748.754

BEFORE
THE PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA
DOCKET NO. 2018-318-E

IN RE: Application of Duke Energy Progress, LLC for Adjustments in Electric Rate Schedules and Tariffs and Request for an Accounting Order	)	CERTIFICATE OF SERVICE

This is to certify that I, Toni Hawkins, a paralegal with the law firm of Robinson Gray Stepp & Laffitte, LLC have this day served copies of **Duke Energy Progress LLC's Errata to the Direct Testimony of Retha H. Hunsicker, Jon F. Kerin and Kendra Ward** in the foregoing matter via electronic mail as follows:

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Thadeus B Culley*
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Dated at Columbia, South Carolina this 18th day of January, 2019.

Toni C. Hawkins